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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/676,300	09/30/2003	Gilad Odinak	018.0304.US.UTL	8164
22895	7590	01/30/2006	EXAMINER	
PATRICK J S INOUE P S 810 3RD AVENUE SUITE 258 SEATTLE, WA 98104			BRINEY III, WALTER F	
			ART UNIT	PAPER NUMBER
			2646	

DATE MAILED: 01/30/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/676,300

Applicant(s)

ODINAK ET AL.

Examiner

Walter F. Briney III

Art Unit

2646

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>19 December 2003</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

1. **Claims 3, 4, 9-16 and 21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.**

Claims 3 and 4 recite, "an electronic ear plug...further comprising an external recharging source." Clearly an ear plug cannot comprise anything external to it. For the purposes of this action, it is assumed that claim 3 recites, "an electronic ear plug system comprising an electronic ear plug according to claim 1 and further comprising..." and that claim 4 recites, "an electronic ear plug system according to claim 3..."

Claims 9-16 recite, "a programmable ear plug providing an audible alarm, comprising :...an external programmer." Clearly an earplug cannot comprise anything external to it. For the purposes of this action, it is assumed that claim 9 recites, "a programmable ear plug system providing an audible alarm, comprising..."

Claim 21 recites, "a computer-readable storage medium holding code for performing the method according to claim 17." However, not all steps of claim 17 are even capable of being performed in software, particularly the situating and placing steps. For the purposes of this action, it is assumed that claim 17 recites, "a computer-readable storage medium holding code for performing the programming step of the method according to claim 17."

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. **Claims 1, 3-10, 12, 14-21 are rejected under 35 U.S.C. 102(e) as being anticipated by Williams et al. (US Patent 6,906,983) in view of the extrinsic evidence Atmel 8-bit AVR® Microcontroller with 1K Byte Flash: ATtiny11/ATtiny12 specification (Rev. 1006D-AVR-07/03, Copyright 2003, retrieved 20 January 2006 from http://www.atmel.com/dyn/resources/prod_documents/doc1006.pdf). Note the secondary reference is being applied in accordance with the rules set forth in MPEP §§ 2131.01(III).**

Claim 1 is limited to “an electronic ear plug for providing a programmable audible alarm.” Williams discloses an autonomous earplug alarm with separate setting device. See Abstract. Figures 1A and 1B depict a perspective view of the ear-plug alarm with separate setting device. As seen therein, the earplug alarm comprises an ear-piece 10 and a gel ear-piece adapter 15. The earpiece corresponds to the “audible alarm circuit” as recited and the gel ear-piece adapter corresponds to the “ear plug” as recited.

Specifically, the earpiece 10 includes those elements depicted in figures 2, 3 and 9. The controller 24, timer 25 and non-volatile storage 26 of figure 2 correspond to the Atmel microcontroller 35 of figure 3. See column 9, lines 43-45. Atmel microcontrollers

all include eight pins as shown in figure 3. According to the Atmel ATtiny12 specification, six of those pins correspond to port B general-purpose input/output pins. Figure 1 of the specification depicts that each of these PORTB pins are interfaced to the microcontroller by a PORTB driver interface. It is by this interface then that all programming and input/output is performed. See the section entitled *Programming the Flash and EEPROM* starting on page 47; figure 27 pins PB0-PB2 enable programming. According to Williams the earpiece receives a user-settable time interval from one of the base stations 18 or 19. See column 7, lines 61-65. Williams also discloses that the alarm sound used by the earpiece is programmed. See column 3, lines 18-22. Because both the time interval and the alarm sound used by the ear-piece are programmed into the Atmel microcontroller and because the microcontroller is programmed using the PORTB driver interface depicted in figure 1 of the ATtiny12 specification, said interface corresponds to the "interface" as recited.

The microcontroller of figure 3 includes the timer of figure 2, which is the aspect of Williams disclosure that performs a countdown. The countdown results are presented to the controller aspect of the microcontroller, which generates an alarm through sounder 27. See page 6, lines 6-14. The above shows that the microcontroller of figure 3 corresponds to the "countdown timer" as recited.

Figures 1A and 1B depict a gel-piece adapter 15 that comprises a "distal end" to be inserted in an ear and a "proximate end" that receives the earpiece 10. Therefore, Williams in view of the Atmel ATtiny12 specification anticipates all limitations of the claim.

Claim 3 is limited to “an electronic ear plug system comprising the electronic ear plug according to claim 1,” as covered by Williams in view of the Atmel ATtiny12 specification. Williams discloses that the battery 23 is rechargeable through one of the base stations 18 and 19. See column 11, lines 66 and 67. The battery of Williams corresponds to the “power source provided therein” while the base stations correspond to the “external recharging source removably coupled to the audible alarm circuit.” Therefore, Williams in view of the Atmel ATtiny12 specification anticipates all limitations of the claim.

Claim 4 is limited to “an electronic ear plug system according to claim 3,” as covered by Williams in view of the Atmel ATtiny12 specification. The housings depicted in figures 1A and 1B correspond to the “external case” as recited. Specifically, these base stations include RS-232 interfaces to provide power and data to the earpiece. The interfaces are housed within the base stations as seen in figures 1A and 1B. See column 9, lines 29-31. Therefore, Williams in view of the Atmel ATtiny12 specification anticipates all limitations of the claim.

Claim 5 is limited to “an electronic ear plug according to claim 1,” as covered by Williams in view of the Atmel ATtiny12 specification. Williams discloses that the earpiece is set from the base station, which means the base station includes components/software (not shown) to select a time delay for an alarm. See column 2, lines 61-67, and column 3, lines 43 and 44. These components correspond to the “timer selector” as recited. As set forth in column 12, lines 5-9, the earpiece could use either

an “absolute” or “relative” time interval. Therefore, Williams in view of the Atmel ATtiny12 specification anticipates all limitations of the claim.

Claim 6 is limited to “an electronic ear plug according to claim 1,” as covered by Williams in view of the Atmel ATtiny12 specification. The alarm is a programmable sound, i.e. an “electronically-reproducible sound.” See column 3, lines 13-22. Therefore, Williams in view of the Atmel ATtiny12 specification anticipates all limitations of the claim.

Claim 7 is limited to “an electronic ear plug according to claim 1,” as covered by Williams in view of the Atmel ATtiny12 specification. The earpiece adapter 15 of figures 1A and 1B is made of a gel, i.e. “soft-coated” and is shaped for insertion into an ear. See column 5, lines 56-60. Therefore, Williams in view of the Atmel ATtiny12 specification anticipates all limitations of the claim.

Claim 8 is limited to “an electronic ear apparatus for providing a programmable audible alarm.” The “means for” recited in this claim have a one-to-one correspondence with the “audible alarm circuit,” the “interface,” the “countdown timer” and the “ear plug” of claim 1, as covered by Williams in view of the Atmel ATtiny12 specification. Therefore, Williams in view of the Atmel ATtiny12 specification anticipates all limitations of the claim.

Claim 9 is limited to “a programmable ear plug system providing an audible alarm.” Apropos the rejection of claim 1, it was shown that Williams in view of the Atmel ATtiny12 specification anticipates a “removable ear plug integrating an audible alarm circuit.” The audible alarm circuit of claim 9 differs slightly from that of claim 1 in that it

refers to the interface of claim 1 as a “programming channel,” however, the PORTB driver interface disclosed by the Atmel ATtiny12 specification clearly corresponds to a programming channel. Claim 9 further comprises a “memory” and a “power supply.” Apropos the rejection of claim 3, it was shown that the prior art anticipates the “power supply.” Williams discloses that the microcontroller of figure 3 includes the non-volatile storage 26 of figure 2, which is used to store the timing and alarm sound data. See column 5, line 66, through column 6, line 14. The base stations of figures 1A and 1B correspond to the “external programmer” as they recharge the battery of the earplug. The base stations connect to the earplug as schematically illustrated in figure 3. Base stations transmit programming via pin PB1 to the microprocessor by way of the PORTB driver interface (not shown). Because the recharging interface disclosed by Williams is not depicted, the “recharging interface” as recited corresponds to the wires that connect the stereo jack receiver of the earplug to the battery. Therefore, Williams in view of the ATtiny12 specification anticipates all limitations of the claim.

Claim 10 is limited “a programmable ear plug system according to claim 9,” as covered by Williams in view of the Atmel ATtiny12 specification. The programmer is housed in either of housing 19 or 18 depicted in figures 1A and 1B, respectively. These housings correspond to the “carrying case” as recited. Therefore, Williams in view of the ATtiny12 specification anticipates all limitations of the claim.

Claim 12 is limited “a programmable ear plug system according to claim 10,” as covered by Williams in view of the Atmel ATtiny12 specification. Both the programming channel and the recharging interface of the earplug are “consolidated” to the stereo jack

30 of figure 3. The jack 30 corresponds to the “combined interface” as recited.

Therefore, Williams in view of the ATtiny12 specification anticipates all limitations of the claim.

Claim 14 is limited “a programmable ear plug system according to claim 9,” as covered by Williams in view of the Atmel ATtiny12 specification. Williams discloses software residing within the microcontroller enabling reception and transmission of data from and to the base stations 18/19. See column 6, line 65, through column 7, line 20. Therefore, Williams in view of the ATtiny12 specification anticipates all limitations of the claim.

Claim 15 is limited “a programmable ear plug system according to claim 9,” as covered by Williams in view of the Atmel ATtiny12 specification. Williams discloses that the power source 23 is a rechargeable “battery.” See column 11, lines 66 and 67. Therefore, Williams in view of the ATtiny12 specification anticipates all limitations of the claim.

Claim 16 is limited “a programmable ear plug system according to claim 9,” as covered by Williams in view of the Atmel ATtiny12 specification. Williams discloses the use of an unlimited amount of earpieces, i.e. “a pair of matched ear plugs.” Therefore, Williams in view of the ATtiny12 specification anticipates all limitations of the claim.

Claim 17 is limited to “a method for providing a programmable audible alarm through an electronic ear plug.” The first step of the claim requires that an “earplug” be situated relative to a “programming interface.” The “earplug” of the claim corresponds to the earpiece adapter 15 of Williams, which is situated relative to an earpiece 10 that

comprises a "programming interface" as shown, for example, in the rejection of claim 9 (i.e. PORTB driver interface). The "programming interface" is removably disposed on an "external programmer" 18/19 by way of a stereo jack 31. Apropos the rejection of claim 9, it was shown that the "ear plug" comprises a "distal end to be received by an ear" and "integrating an audible alarm circuit on a proximal end." The rejection of claim 9 showed that the "programming interface" was used to program a "user-settable time interval" and an "alarm tone" into a "memory." The rejection of claim 9 showed that the "timer" commenced timing and generated an alarm tone in accordance with the claim. Williams discloses placing the earpiece into an ear. See column 3, lines 23-35. Therefore, Williams in view of the Atmel ATtiny12 specification anticipates all limitations of the claim.

Claim 18 is limited to "a method according to claim 17," as covered by Williams in view of the Atmel ATtiny12 specification. The external programmer defined by the base stations 18 and 19 include software to program the earpieces. See column 2, lines 62-67. This software corresponds to the "programming input control and logic through controls external to the electronic ear plug," as recited. Therefore, Williams in view of the Atmel ATtiny12 specification anticipates all limitations of the claim.

Claim 19 is limited to "a method according to claim 17," as covered by Williams in view of the Atmel ATtiny12 specification. Apropos the rejection of claim 3, it was shown that Williams discloses recharging the battery 23 using the base stations 18 and 19. Therefore, Williams in view of the Atmel ATtiny12 specification anticipates all limitations of the claim.

Claim 20 is limited to "a method according to claim 17," as covered by Williams in view of the Atmel ATtiny12 specification. Apropos the rejection of claim 5, it was shown that the earpiece of Williams receives either an "absolute" or "relative" time interval. Therefore, Williams in view of the Atmel ATtiny12 specification anticipates all limitations of the claim.

Claim 21 is limited to "a computer-readable storage medium holding code for performing the programming step of the method according to claim 17," as covered by Williams in view of the Atmel ATtiny12 specification. Williams discloses the use of microcontrollers, which use software for control. See column 2, lines 62-67, and figures 8A and 8B. Therefore, Williams in view of the Atmel ATtiny12 specification anticipates all limitations of the claim.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. **Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Williams in view of the Atmel ATtiny12 specification and further in view of Aceti (US Patent 6,253,871).**

Claim 2 is limited to "an electronic ear plug according to claim 1," as covered by Williams in view of the Atmel ATtiny12 specification. Figures 1A and 1B depict a gel earpiece adapter 15. The figures depict the adapter with a cavity defined by dashed

lines. The dash lines indicate that the cavity is formed throughout the adapter such that the proximal end receives the earpiece, however, the lines do not clearly depict a "set of perforations" as recited. Therefore, Williams in view of the Atmel ATtiny12 specification anticipate all limitations of the claim with the exception of a "set of perforations."

However, this deficiency is resolved by an obvious modification.

In particular, it is known to provide a "set of perforations" within an earplug. As shown in figure 1 of Aceti, perforation 24 relieves pressure in the ears. See column 4, lines 19-28.

It would have been obvious to one of ordinary skill in the art at the time of the invention to include a "set of perforations" as taught by Aceti for the purpose of relieving pressure in the ears.

4. **Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Williams in view of the Atmel ATtiny12 specification and further in view of Knapp (US Patent 5,253,300).**

Claim 11 is limited "a programmable ear plug system according to claim 10," as covered by Williams in view of the Atmel ATtiny12 specification. Figures 1A and 1B clearly lack any "conformable cavities within the carrying case configured to receive the removable ear plug." However, this deficiency is overcome by an obvious modification.

In particular, Knapp discloses a solar powered hearing aid. See Abstract. As seen in the embodiment of figure 12, the hearing aid devices are received in a "carrying case" as they are charged through contacts provided therein.

It would have been obvious to one of ordinary skill in the art at the time of the invention to provide a carrying case as taught by Knapp for the purpose of protecting the hearing aids while they are charged.

5. **Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Williams in view of the Atmel ATtiny12 specification and further in view of Mizoguchi et al. (US Patent 5,566,226).**

Claim 13 is limited “a programmable ear plug system according to claim 9,” as covered by Williams in view of the Atmel ATtiny12 specification. Neither Williams nor the Atmel ATtiny12 specification indicates that the laptop base station 18 corresponds to the “mobile telephone adapter” as recited. However, this deficiency is overcome by an obvious modification.

In particular, the examiner takes Official Notice that it was well known in the art at the time of the invention to use a laptop as a mobile telephone adapter. For example, Mizoguchi discloses such an arrangement. See Abstract and figure 3. In doing so, a laptop is adapted to provide data communication over the Internet by way of radio waves. See column 1, lines 28-41 and lines 50-53.

It would have been obvious to connect a mobile telephone to a laptop as taught by Mizoguchi for the purpose of enabling the laptop to communicate data wirelessly. As a result, the laptop of Williams corresponds to the “mobile telephone adapter,” as recited.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Walter F. Briney III whose telephone number is 571-272-7513. The examiner can normally be reached on M-F 8am - 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sinh Tran can be reached on 571-272-7564. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



SINH TRAN
SUPERVISORY PATENT EXAMINER

WFB